

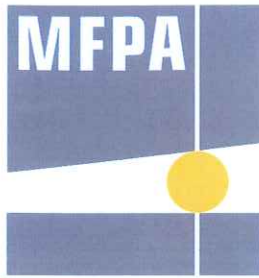
# Test Report

## Distance tube made of fibre concrete

PB 1.1/ 12-148-3 Ä | 06.06.2012 | english

Testing the water penetration depth on concrete test pieces supplied with built-in distance tubes, sealed on both sides with one fibre-reinforced concrete plug and one 3 cm fibre-reinforced concrete sealing cone in accordance with DIN EN 12390-8

Tested by: MFPA Leipzig GmbH, Leipzig



VMPA-accredited concrete test authority  
VMPA-B-2003

# Mfpa Leipzig GmbH

Test, Inspection and Certification Authority for  
Building Materials, Products and Systems

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## Test report no. PB 1.1/12-148-3 Ä

Replaces PB 1.1/12-148-3 from 05.06.2012  
from 06 June 2012  
1. copy

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**Subject matter:** Testing the water penetration depth on concrete test pieces supplied with built-in 'FRANK fibre-reinforced concrete distance tubes – MR 22', sealed on both sides with one fibre-reinforced concrete plug ST220020 and one 3 cm fibre-reinforced concrete sealing cone FBVKZ 22T in accordance with DIN EN 12390-8

**Client:** Max Frank GmbH & Co. KG  
Mitterweg 1  
94339 Leiblifing

**Date of order:** 10.05.2012

**Client's reference:** J. Schmidbauer

**Samples received on:** 15.05.2012

**Sampling:** Client

**Identification:** C 1 to C 3

**Date of testing:** 29.05. to 01.06.2012

**Person in charge:** Dipl.-Ing. M. Becker

This document consists of 3 pages and 2 appendices.

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Testing laboratory accredited by DAkkS GmbH in accordance with DIN EN ISO/IEC 17025. The accreditation only applies for the testing methods listed in the certificate (marked with \* in this document). The certificate can be seen at [www.mfpa-leipzig.de](http://www.mfpa-leipzig.de).

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## 1 Preliminary remarks

MFPA Leipzig GmbH was commissioned to test the water penetration depth in accordance with DIN EN 12390-8 [1] of concrete-cast 'FRANK fibre-reinforced concrete distance tubes – MR 22' with glued-in fibre-reinforced concrete sealing plugs/cones (edge length 15 cm). Unlike in the test specification, the test was performed on composite test pieces. The samples were stored at 20 °C under water until tested.

## 2 Test results

### 2.1 Sample identification

Series C: C 1 to C 3 sealed on each side with one fibre-reinforced concrete plug St220020 and one 3 cm fibre-reinforced concrete sealing cone FBVKZ22T, glued in with 'Repoxal two-pot adhesive'

Strength class: C 20/25

Date of manufacture: 10.04.2012

Date of testing: 29.05.2012

Age of sample: 49 days

### 2.2 Water penetration depth

At the end of the test the samples were split along the concrete-cast 'FRANK fibre-reinforced concrete distance tubes – MR22'. The test results are summarised in Table 1. Appendix 1 shows the water distribution after the test pieces were split. Appendix 2 contains a documentation of the test pieces after testing.

Table 1: Series C


Test piece	Water penetration depth [mm]
1	16
2	17
3	15

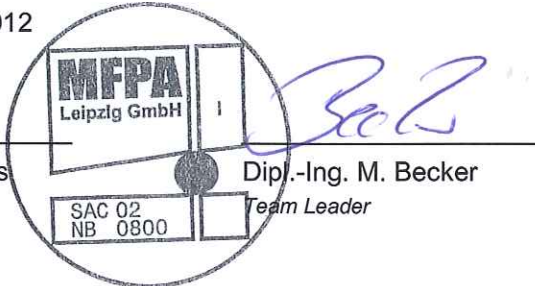
### 3 List of references

- [1] DIN EN 12390-3 'Testing hardened concrete – water penetration depth under pressure';  
Edition 07/2009

The results of the tests refer exclusively to the test items described herein and not to the population. This document does not replace any certificate of conformity or usability as defined by the building regulations (national/European).

Leipzig, 06 June 2012

  
Dipl.-Ing. M. Orgass  
Head of Division


  
Dipl.-Ing. M. Becker  
Team Leader

SAC 02  
NB 0800

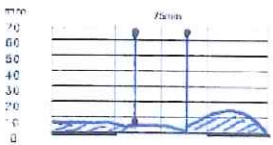
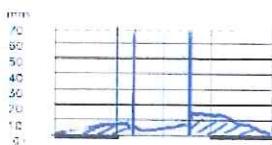
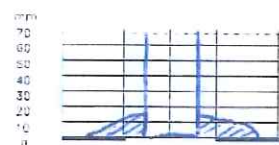

Appendices: Appendix 1 Test records of water penetration depth  
Appendix 2 Documentation of the test pieces



## Test record of the water penetration depth

<b>MFPA LEIPZIG GmbH</b> Hans-Weigel-Str. 2b 04139 Leipzig Tel. 0341 / 6582145	<b>PRÜFUNG DER WASSERUNDURCHLÄSSIGKEIT          VON BETON NACH DIN EN 12390-8</b>	
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<b>Angaben des Auftraggebers</b>			
[.....] Eignungsprüfung	[.....] Güteprüfung	Sollprüfalter .....Tage	
Baustelle / Bauwerk			
Bauteil / Entnahmestelle			
Transportbetonwerk			
Betonsorten-Nr.:	<i>Senic C</i>		
Festigkeitsklasse	<i>C 20/25</i>		
TB Lieferschein-Nr.:			
Probekörper - Herstellungsdatum	<i>03.04.12</i>		
Zul. Wassereindringtiefe (mm)			
Lagerung bis Einlieferung :	Tage in der Form bei    °C und    Tage im Wasser bei    °C		
	.....		

<b>Feststellungen der Prüfstelle</b>			
Tag der Einlieferung	<i>15.05.12</i>	angenommen von : <i>Becker</i>	
äußere Beschaffenheit	<i>i.O.</i>		
nachträgliches Aufrauen	<i>nein</i>		
Lagerung bis zur Prüfung	<i>14</i>	Resttage in Wasser bei <i>20</i> °C	
Probekörper-Kennzeichen	<i>C 1</i>	<i>C 2</i>	<i>C 3</i>
Beginn der Prüfung Datum	<i>29.05.2012</i>	<i>29.05.2012</i>	<i>29.05.2012</i>
Prüfalter bei Prüfbeginn Tage			
Abmessungen mm	<i>150 x 150 x 150</i>	<i>150 x 150 x 150</i>	<i>150 x 150 x 150</i>
Darstellung der Wasserverteilung nach dem Aufspalten der Prüfkörper			
größte Eindringtiefe e <sub>w</sub> mm	<i>16</i>	<i>17</i>	<i>15</i>
größter Wert e <sub>w</sub> mm	<i>17</i>		
Bemerkungen :			
			
<i>Leipzig</i> Ort	<i>01.06.2012</i> Datum	<i>Kastner</i> Stempel / Unterschrift	

### Documentation of the test pieces

(Photos 1 to 3)



Photo 1: Series C 'FRANK fibre-reinforced concrete distance tubes – MR 22 sealed with one fibre-reinforced concrete plug St220020 and one 3 cm fibre-reinforced concrete sealing cone FBVKZ22T, sample 1

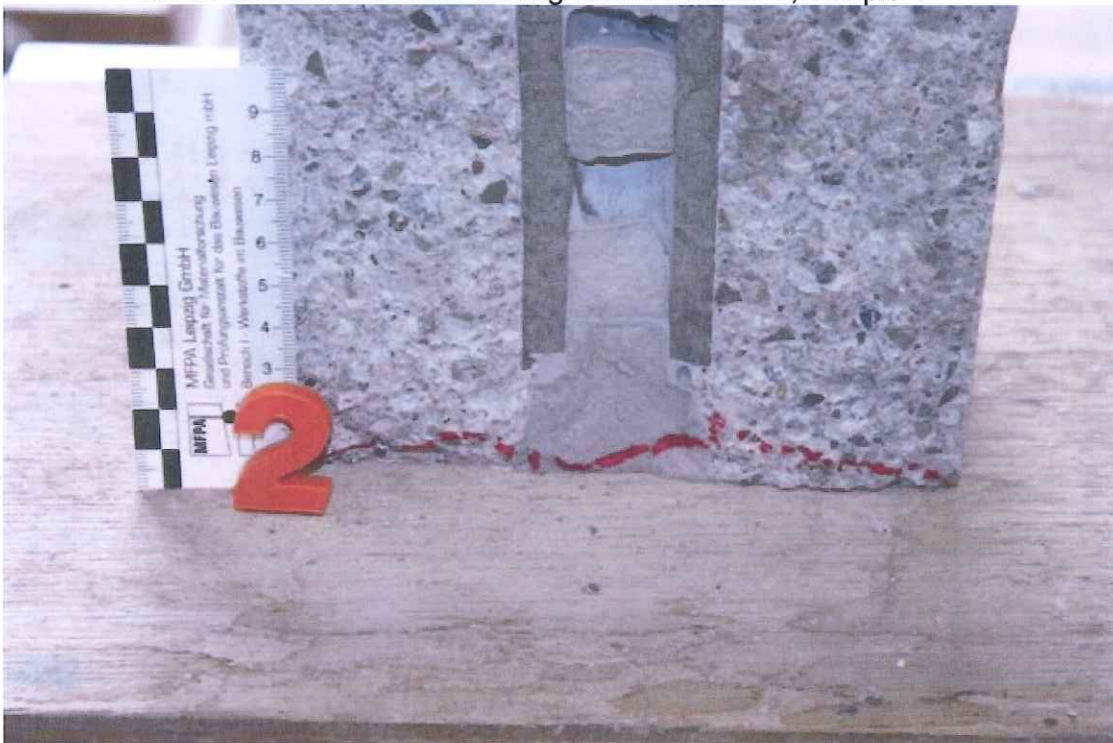


Photo 2: Series C 'FRANK fibre-reinforced concrete distance tubes – MR 22 sealed with one fibre-reinforced concrete plug St220020 and one 3 cm fibre-reinforced concrete sealing cone FBVKZ22T, sample 2

### Documentation of the test pieces

(Photos 1 to 3)

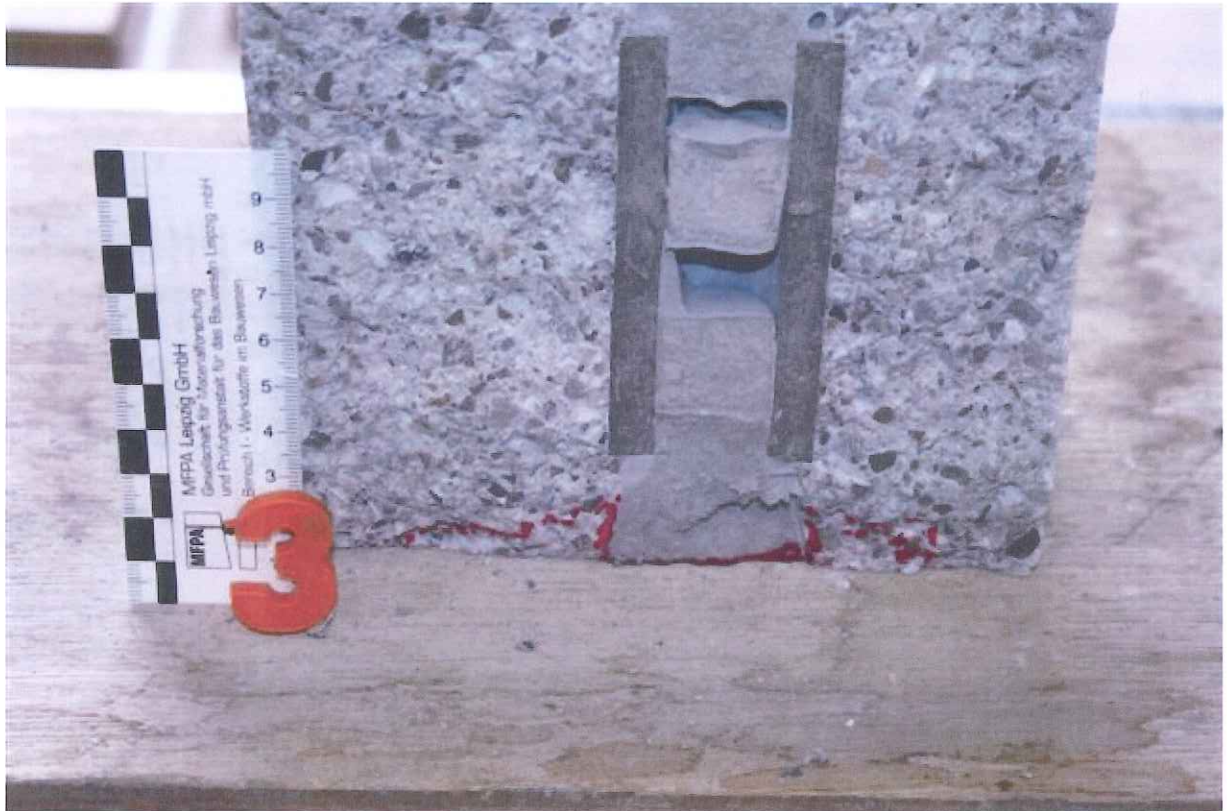


Photo 3: Series C 'FRANK fibre-reinforced concrete distance tubes – MR 22 sealed with one fibre-reinforced concrete plug St220020 and one 3 cm fibre-reinforced concrete sealing cone FBVKZ22T, sample 3